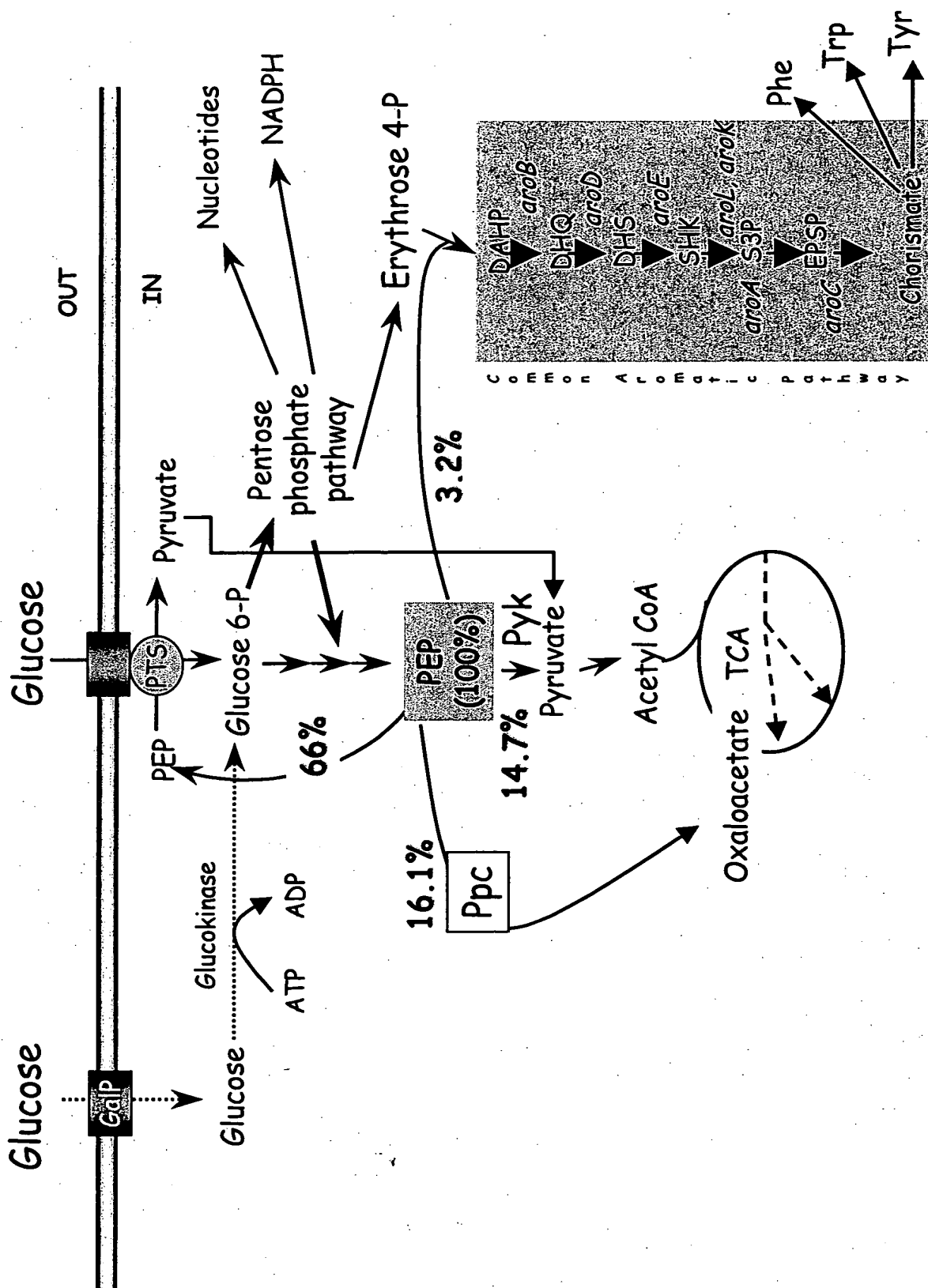


FIG. 1A



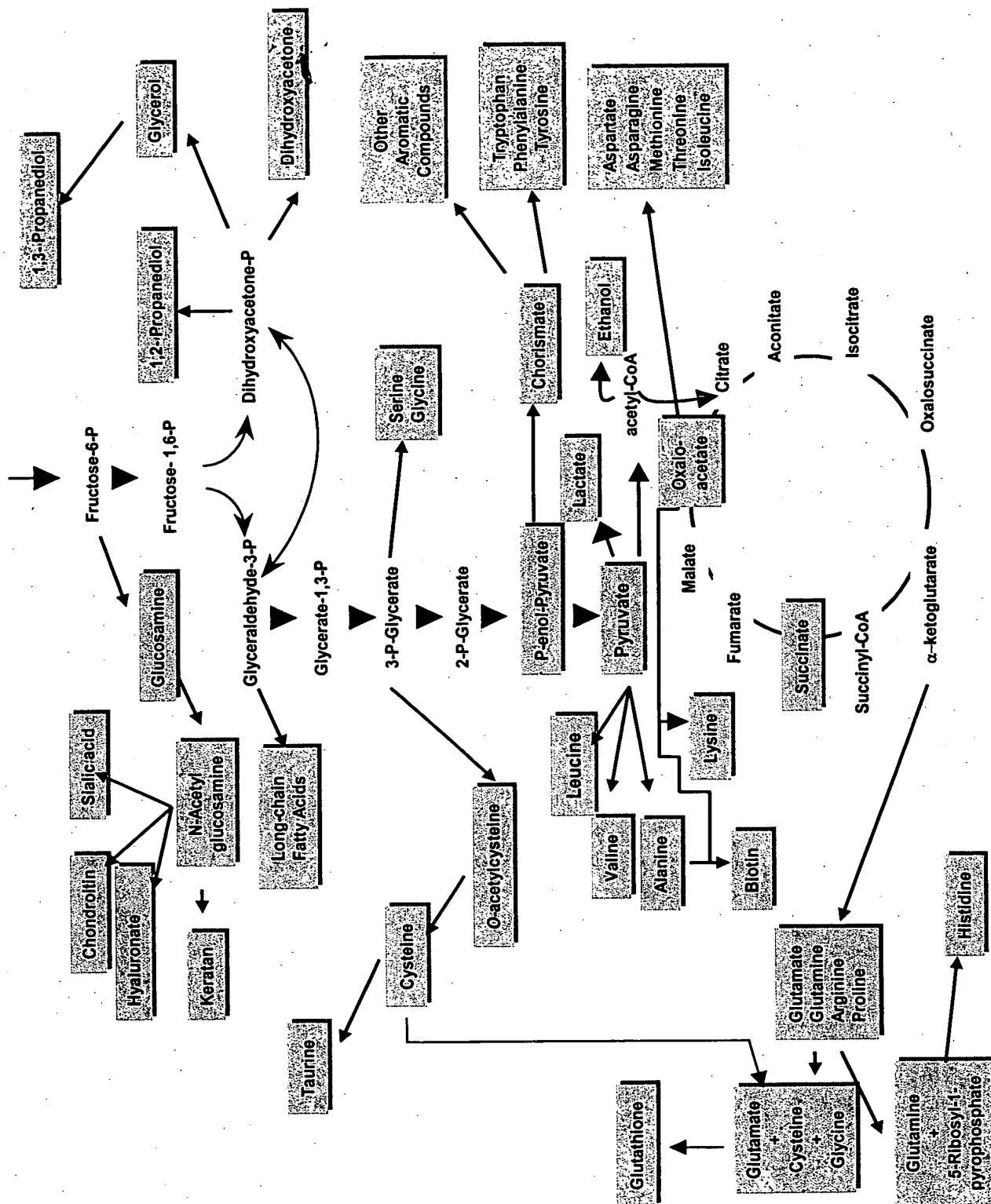


FIG. 2

TCGGTTTTTCACAGTTGTTACATTTCTTTTCAGTAAAGTCTGGATGCATATGGC  
GGCCGCATAACTTCGTATAGCATACATTATACGAAGTTATCTAGAGTTGCATGC  
CTGCAGGTCCGAATTTCTGCCATTCATCCGCTTATTATCACTTATTCAGGCGT  
AGCACCAGGCGTTTAAGGGCACCAATAACTGCCTTAAAAAAATTACGCCCC  
GCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGA  
CATGGAAGCCATCACAAACGGGCATGATGAACCTGAATCGCCAGCGGCAT  
CAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGG  
GCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAAC  
TCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTA  
GGGAAATAGGCCAGGTTTTACCGTAACACGCCACATCTTGCGAATATA  
TGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGA  
AAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTA  
TCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGGAATTCCGGATG  
AGCATTTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAACTTG  
TGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAAC  
GGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTT  
CTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTT  
TTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATAC  
GCCCGGTAGTGATCTTATTTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCC  
GATCAACGTCTCATTTCGCCAAAAGTTGGCCCAGGGCTTCCCGGTATCAACA  
GGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTCACAGGTATTTA  
TTCGGACTCTAGATAACTTCGTATAGCATACATTATACGAAGTTATGGATCATG  
GCTGTGCAGGTCGTAAATCACTGCATAATTCGTGTCGCTCAAGGCGCACTCCC  
GTTCTGGATAATGTTTTTTTGCGCCGACATCATAACGGTTCTGGCAAATATTCT  
GAAATGAGCTGTTGACAATTAATCATCCGGCTCGTATAATGTGTGGAATTGTG  
AGCGGATAACAATTTACACAGGAAACAGACTAATTCACAATAAAAAATAACC  
ATATTGGAGGGCATCATG

FIG. 3

**CAGCAGTGGTGGTGATCGGTTTTGGCTGGGGGCCCTCCCCGCACCGGAG  
GCCGATTACAGCCAACCACAACAGGCAAAGGGTTTGGAAGATATTCATA  
TTATTATTGCGGTTGTACAGTTGTTACATTTCTTTTCAGTAAAGTCTGG  
ATGCATATGGCGGCCGCATAACTTCGTATAGCATACATTATACGAAGTTATGGATC  
ATGGCTGTGCAGGTCGTAAATCACTGCATAATTGGTGTGCTCAAGGCGCACT  
CCCGTTCTGGATAATGTTTTTTGCGCCGACATCATAACGGTTCTGGCAAATATT  
CTGAAATGAGCTGTTGACAATTAATCATCCGGCTCGTATAATGTGTGGCATTG**

FIG. 4

ACTTAGTTTGCCCAGCTTGCAAAAAGGCATCGCTGCAATTGGATGCATATGG  
CGGCCGCATAA*CTTCGTATAGCATACATTATACGAAGTTATCTAGAGTTGCATG*  
CCTGCAGGTCCGAATTTCTGCCATTCATCCGCTTATTATCACTTATTCAGGCGT  
AGCACCAGGCGTTTAAAGGGCACCAATAACTGCCTTAAAAAAATTACGCCCC  
GCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGA  
CATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCAT  
CAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGG  
GCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAACTGGTGAAAC  
TCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCTTTA  
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TGTGTAGAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGA  
AAACGTTTTAGTTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTA  
TCCCATATCACCAGCTCACCGTCTTTTCATTGCCATACGGAATTCCGGATG  
AGCATTATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAACTTG  
TGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAAC  
GGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTT  
CTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTT  
TTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATAC  
GCCCGGTAGTGATCTTATTTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCC  
GATCAACGTCTCATTTTCGCCAAAAGTTGGCCCAGGGCTTCCCGGTATCAACA  
GGGACACCAGGATTTATTTATTCTGCGAAGTGATCTTCCGTACAGGTATTTA  
TTCGGACTCTAGATAA*CTTCGTATAGCATACATTATACGAAGTTATGGATCATG*  
GCTGTGCAGGTTCGTAAATCACTGCATAATTCGTGTGCTCAAGGCGCACTCCC  
GTTCTGGATAATGTTTTTTGCGCCGACATCATAACGGTTCTGGCAAATATTCT  
GAAATGAGCTGCTGACAATTAATCATCCGGCTCGTATAATGTGTGGAATTGTG  
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FIG. 5

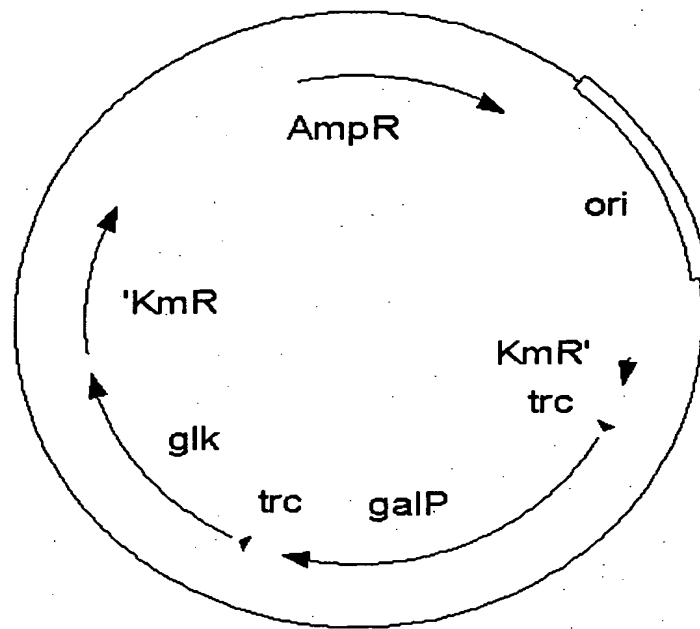


FIG. 6

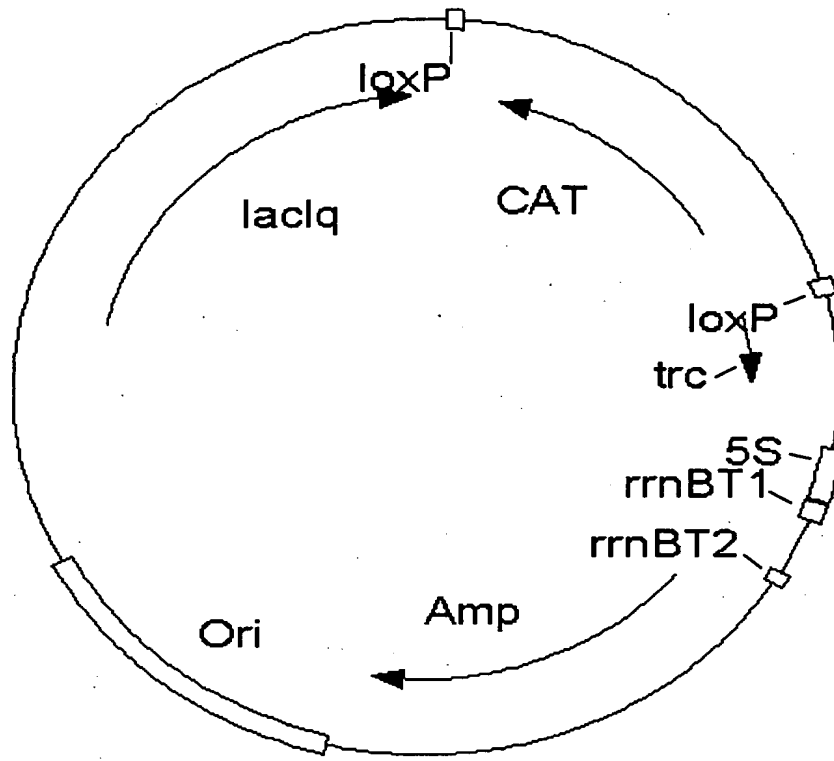


FIG. 7A.

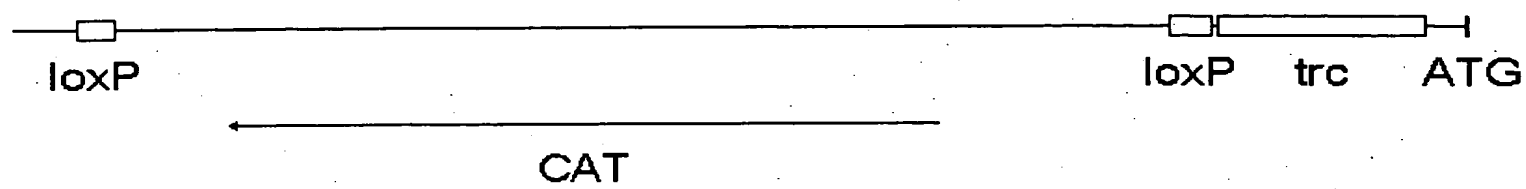


FIG. 7B

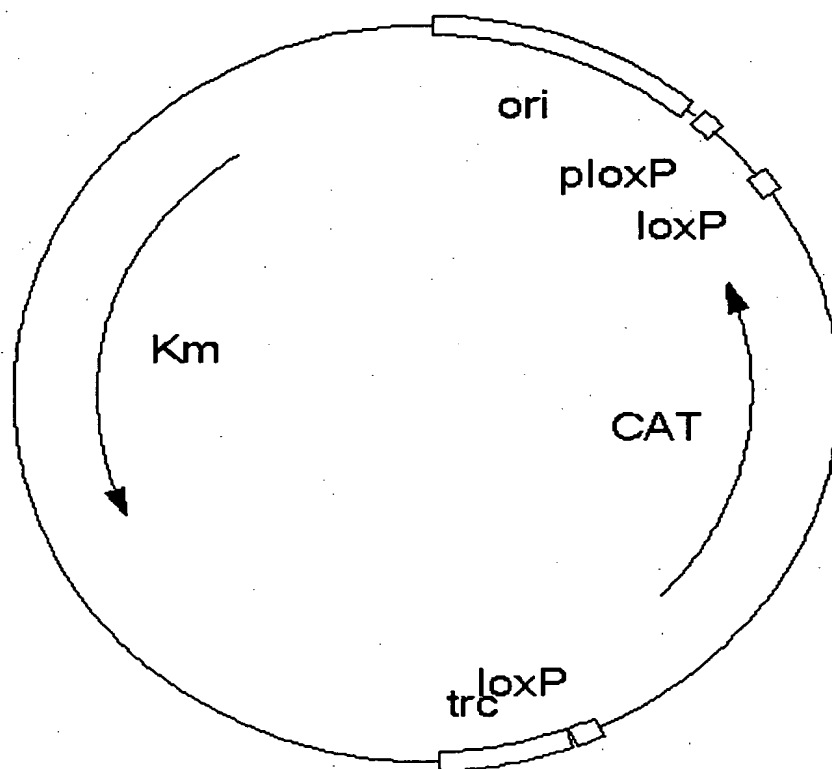




FIG. 8.

TAGTAAAGCCCTCGCTAGATTTTAATGCGGATGTTGCGATTACTTCGCCAACTATTG  
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GCGCTGTACCAAATGCGGGACAACGTAAGCACTACATTTGCTCATCGCCAGCCCA  
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GAAGATACCTGCAAGAATGTCATTGCGCTGCCATTCTCCAAATTGCAGTTCGCGCT  
TAGCTGGATAACGCCACGGAATGATGTCGTCGTGCACAACAATGGTGACTTCTACA  
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ATTTGTTAACATACTCTTCATTGGCAAAGTCTGGAGCGAACTTAGCAATGGCATCAA  
ACGTTCTCCAACCATGCGAGACTTGGATAACGTGTTTACGCATCGAAATAAGGTTTGT  
CCTTACCGAAATCCCTCCAGAATGCAGCAATGGCTGGTTGAGAGATGATAATGGTA  
CCGTCGACGTGGAACAAAGCGGCGTTAACTTTCAAAGATAGAGGTTTAGTAGTCAA  
TCCCATAATTCTAGTCTGTTTCCTGGATCCAATAAATCTAATCTTCATGTAGATCTAA  
TTCTTCAATCATGTCCGGCAGGTTCTTCATTGGGTAGTTGTTGTAAACGATTTGGTA  
TACGGCTTCAAATAATGGGAAGTCTTCGACAGAGCCACATGTTTCCAACCATTCGT  
GAACTTCTTTGCAGGTAATTAAACCTTGAGCGGATTGGCCATTCAACAACCTCCTTTT  
CACATTCCCAGGCGTCCTTACCAGAAGTAGCCATTAGCCTAGCAACCTTGACGTTT  
CTACCACCAGCGCAGGTGGTGATCAAATCAGCAACACCAGCAGACTCTTGGTAGTA  
TGTTTCTTCTCTAGATTCTGGGAAAAACATTTGACCGAATCTGATGATCTCACCCAA  
ACCGACTCTTTGGATGGCAGCAGAAGCGTTGTTACCCAGCCTAGACCTTCGACGA  
AACCACAACCTAAGGCAACAACGTTCTTCAAAGCACCACAGATGGAGATACCAGCA  
ACATCTTCGATGACACTAACGTGGAAGTAAGGTCTGTGGAACAAGGCCTTTAGAAC  
CTTATGGTCGACGTCCTTGCCCTCGCCTCTGAAATCCTTTGGAATGTGGTAAGCAA  
CTGTTGTTTCAGACCAGTGTTCTTGAGCGACTTCGGTGGCAATGTTAGCACCAGAT  
AGAGCACCACATTGAATACCTAGTTCCTCAGTGATGTAAGAGGATAGCAATTGGAC  
ACCTTTAGCACCAACTTCAAACCCCTTTAGACAGGAGATAGCTCTGACGTGTGAATC  
AACATGACCTTTCAATTGGCTACAGATACGGGGCAAAAATTGATGTGGAATGTTGAA  
AACGATGATGTCGACATCCTTGACTGAATCAATCAAGTCTGGATTAGCAACCAAATT  
GTCGGGTAGAGTGATGCCAGGCAAGTATTTACGTTTTGATGTCTAGTATTTATGAT  
TTCAGTCAATTTTTACCATTTGATCTCTTCTTCGAACACCCACATTTGTACTATTGGA  
GCGAAAACCTCTGGGTATCCCTTACAATTTTCGGCAACCACCTTGGCAATAGTAGTA

CCCCAGTTACCAGATCCAATCACAGTAACCTTGAAAGGCTTTTCGGCAGCCTTCAA  
AGAAACAGAAGAGGAACTTCTCTTTCTACCAGCATTCAAGTGGCCGGAAGTTAAGT  
TTAATCTATCAGCAGCAGCAGCCATGGAATTGTCCTCCTTACTAGTCATGGTCTGTT  
TCCTGTGTGAAATTGTTATCCGCTCACAATCCACACATTATACGAGCCGGATGATT  
AATTGTCAACAGCTCATTTCAGAATATTTGCCAGAACCGTTATGATGTCGGCGCAAA  
AAACATTATCCAGAACGGGAGTGCGCCTTGAGCGACACGAATTATGCAGTGATTTA  
CGACCTGCACAGCCATACCACAGCTTCCGATGGCTGCCTGACGCCAGAAGCATTG  
GTGCACGCTAGCCAGTACATTTAAATGGTACCCTCTAGTCAAGGCCTTAAGTGAGT  
CGTATTACGGACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTT  
ACCCAACCTAATCGCCTTGACGACATCCCCCTTTCGCCAGCTGGCGTAATAGCGA  
AGAGGCCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGG  
CGCCTGATGCGGTATTTTCTCCTTACGCATCTGTGCGGTATTTACACCCGCATATG  
GTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACC  
CGCCAACACCCGCTGACGAGCT



FIG. 9

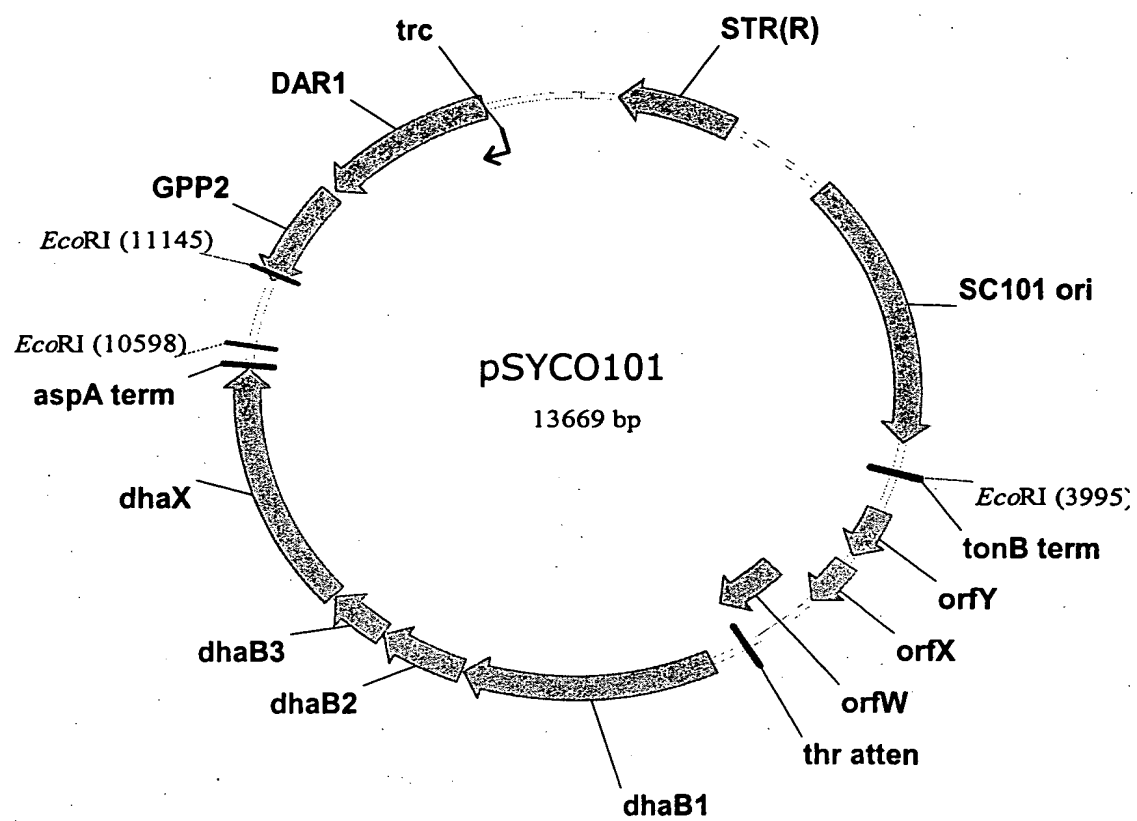
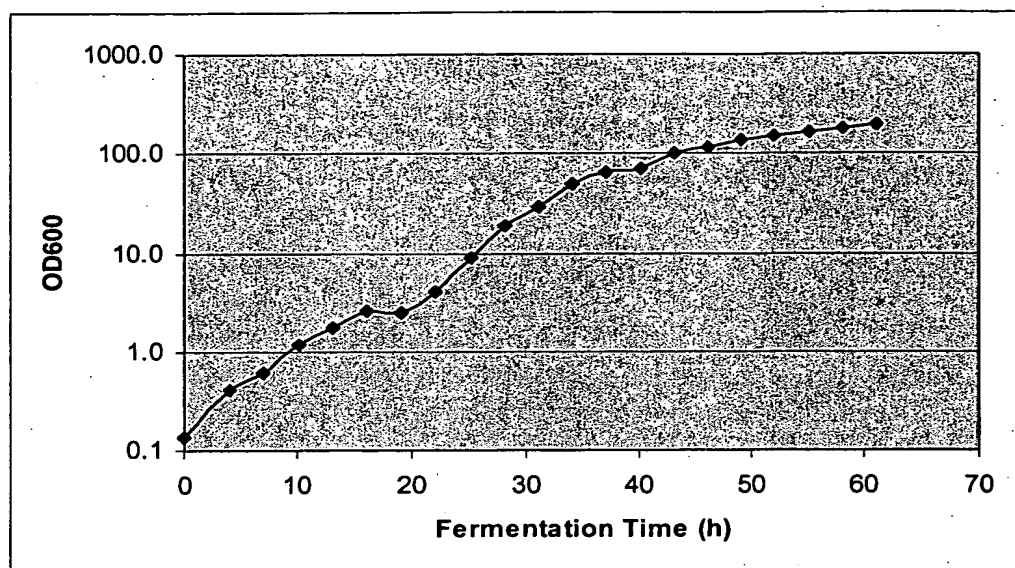


FIG. 10.

A.



B.

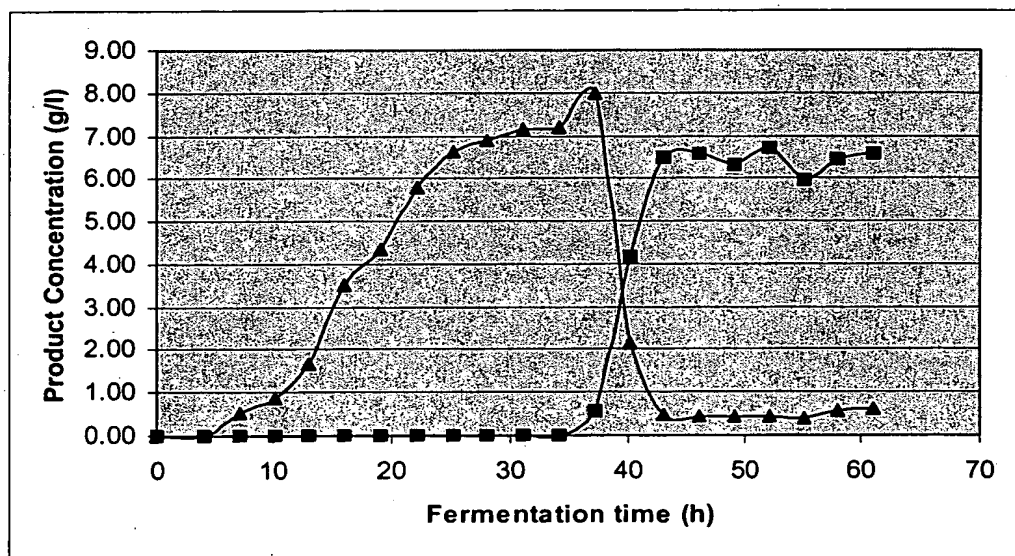
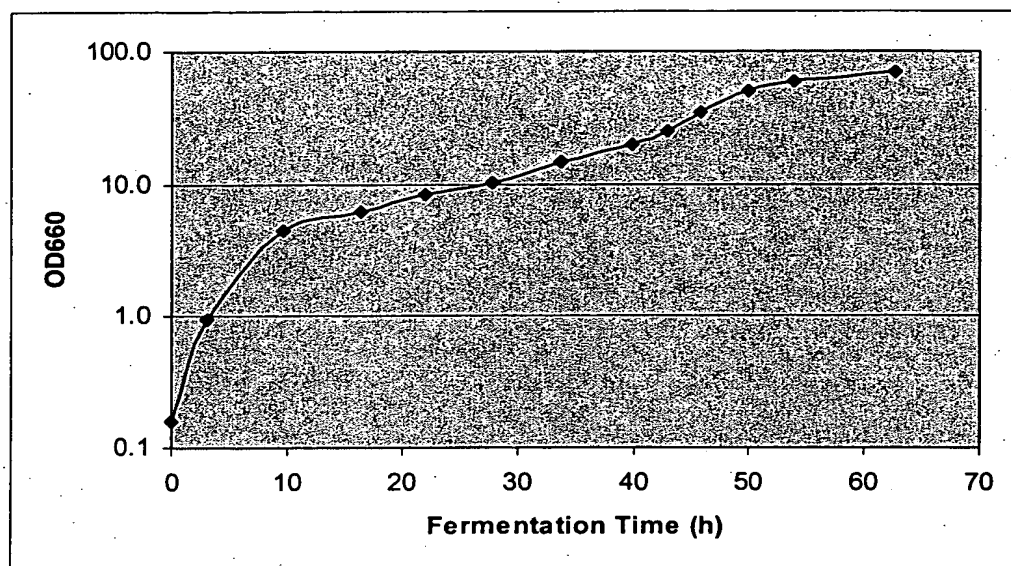


FIG. 11

A.



B.

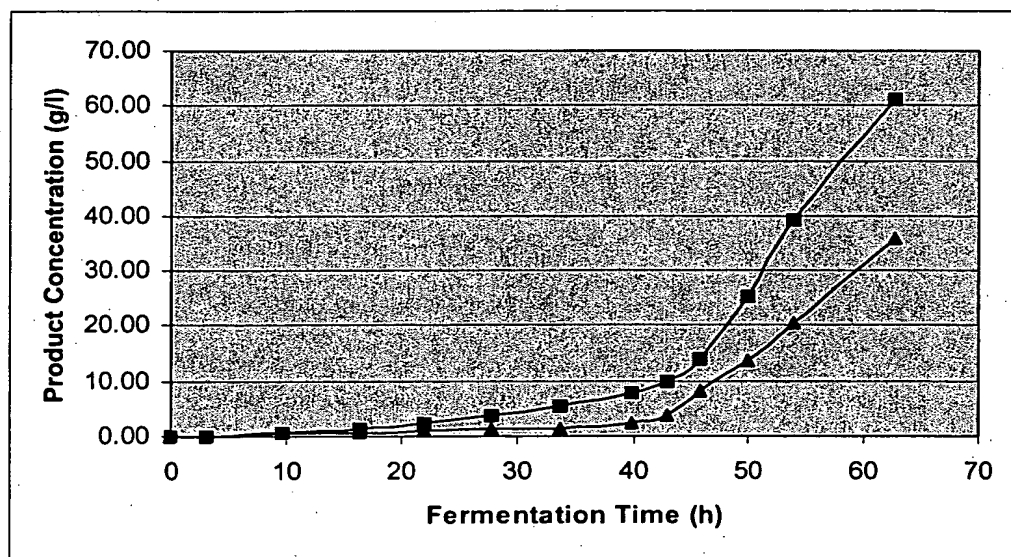
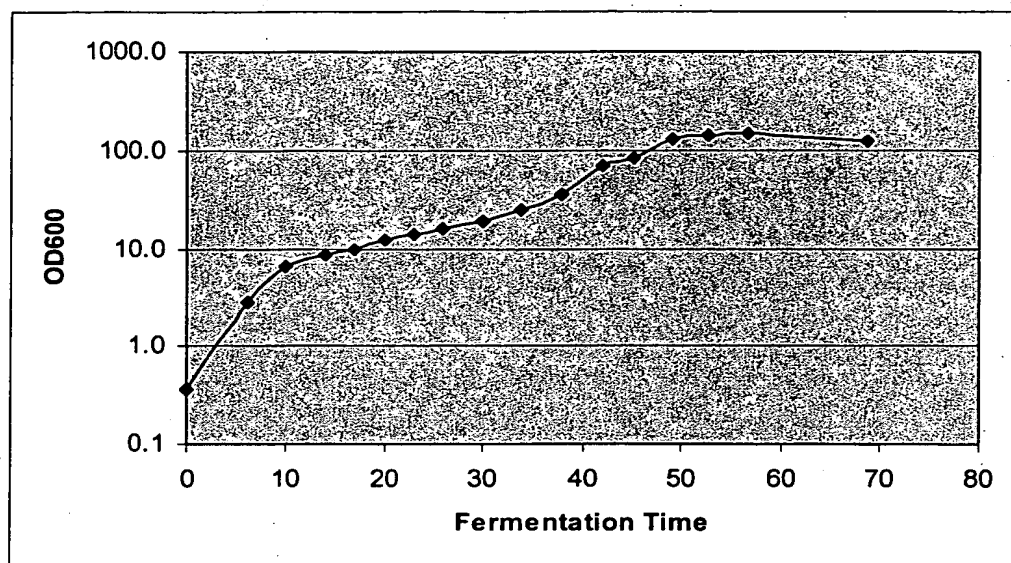


FIG. 12

A.



B.

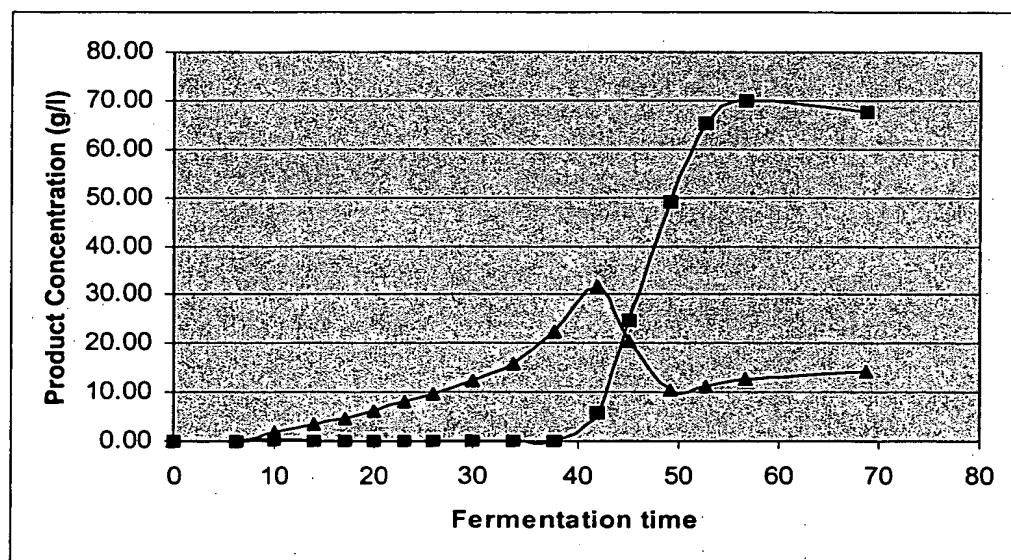


Fig. 13

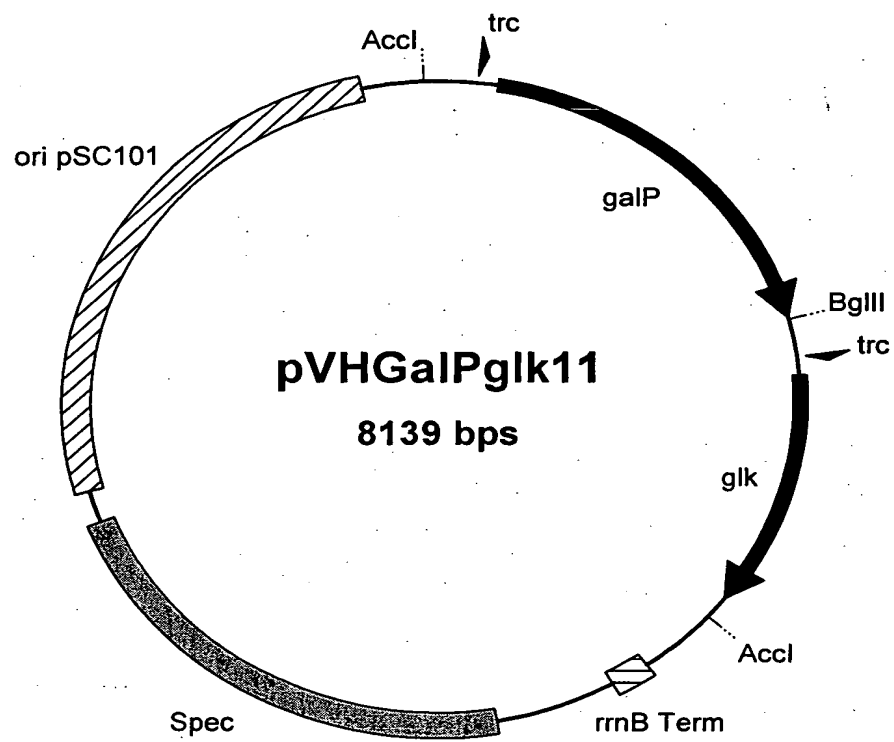


FIG. 13

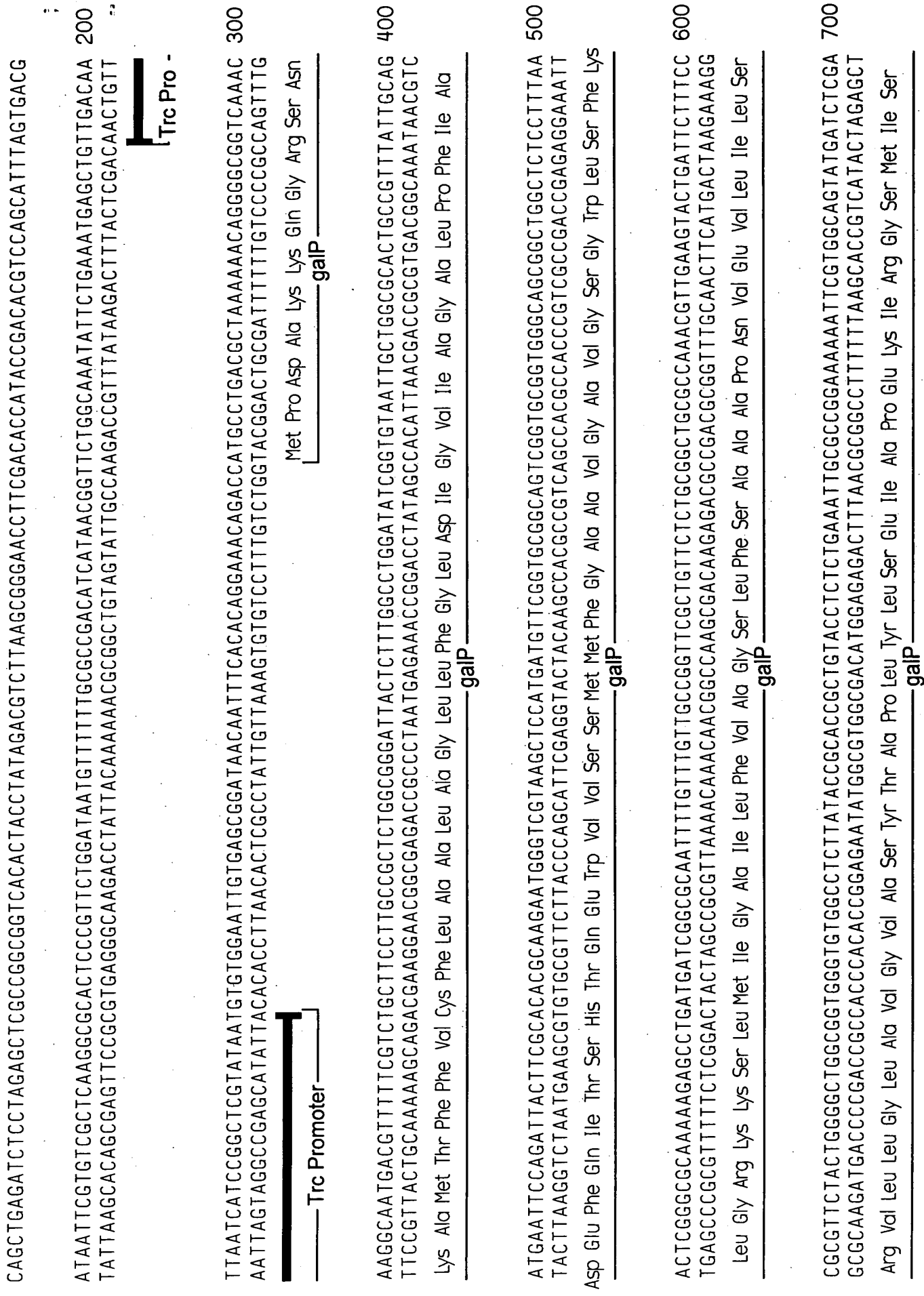


FIG. 14A

TGATCAGTIGATGATCACTATCGGGATCCTCGGTGCTTATCTTTCTGATACCGCCTTCAGCTACACCGGTGCAATGGCGCTGGATGCTGGGTGATTAT 800  
ACATAGTCAACTACTAGTAGCCCTAGGAGCCACGGAATAGAAAGACTATGGCGGAAGTCGATGTGGCCACGTACCGGACCTACGACCCACACTAATA  
Met Tyr Gln Leu Met Ile Thr Ile Gly Ile Leu Gly Ala Tyr Leu Ser Asp Thr Ala Phe Ser Tyr Thr Gly Ala Trp Arg Trp Met Leu Gly Val Ile Ile

CATCCCGGCAATTTTGCTGCTGATTGGTGTCTTCTTCTGCCAGACGCCACGTTGGTTTGCCGCCAAACGCCGTTTGTGATGCCGAACGCGTGCTG 900  
GTAGGGCCGTTAAACGACGACTAACCCACAGACAGAAGGACGGTCTGTGCGGTGCAACCAACGGCGGTTTGGCGCAAAACAACACTACGGCTTGCGCACGAC  
Ile Pro Ala Ile Leu Leu Ile Gly Val Phe Phe Leu Pro Asp Ser Pro Arg Trp Phe Ala Ala Lys Arg Arg Phe Val Asp Ala Glu Arg Val Leu

CTACGCCCTGCGTGACACCAGCGGGGAAGCGAAACGGAACTGGATGAAATCCGTGAAAGTTTGCAGGTTAAACAGAGTGGCTGGGCGCTGTTTAAAGAGA 1000  
GATCGGACGCACTGTGGTCGCGCCTTCGCTTTCGCTTGACCTACTTTAGGCACATTTCAAACGTCCTCAATTTGCTCACCAGCCCGGACAAAATTTCTCT  
Leu Arg Leu Arg Asp Thr Ser Ala Glu Ala Lys Arg Glu Leu Asp Glu Ile Arg Glu Ser Leu Gln Val Lys Ser Gly Trp Ala Leu Phe Lys Glu

ACAGCAACTTCGCGCGCGGTGTTCCCTTGGCGTACTGTTGCAGGTAATGCAGCAATTACCGGGATGAACGTCATCATGTATTACGCGCCGAAATCTT 1100  
TGTCGTTGAAGCGGCGGCCACAAAGAACCGCATGACAACGTCATTACGTCGTTAAGTGGCCCTACTTGCAGTAGTACATAATGCGCGCTTTTAGAA  
Asn Ser Asn Phe Arg Arg Ala Val Phe Leu Gly Val Leu Leu Gln Val Met Gln Gln Phe Thr Gly Met Asn Val Ile Met Tyr Tyr Ala Pro Lys Ile Phe

CGAACTGGCGGGTTATACCAACACTACCGAGCAAAATGTGGGGACCGTGATTGTGGCCTGACCAACGTA CTGTCACCTTTTATCGCAATCGGCCTTGTT  
GCTTGACCGCCCAATATGTTGTGATGGCTCGTTACACCCCTGGCACTAACAGCCGACTGGTTGCATGAACGGTGGAAATAGCGTTAGCCCGGAACAA  
Glu Leu Ala Gly Tyr Thr Asn Thr Thr Glu Gln Met Trp Gly Thr Val Ile Val Gly Leu Thr Asn Val Leu Ala Thr Phe Ile Ala Ile Gly Leu Val

GACCGCTGGGACGTAAACCAACGCTAACGCTGGGCTTCCTGGTGATGGCTGGCATGGGCGTACTCGGTACAATGATGCATATCGGTATTCACCTCTC 1300  
CTGGCGACCCCTGCATTGTGCGATTGCGACCCGGAAGGACCAC TACCGACGACCGTACCCGCGATGAGCCATGTTACTACGTATAGCCATAAGTGAGAG  
Asp Arg Trp Gly Arg Lys Pro Thr Leu Thr Leu Gly Phe Leu Val Met Ala Ala Gly Met Gly Val Leu Gly Thr Met Met His Ile Gly Ile His Ser

CGTCGGCGCAGTATTTCCGCATCGCCATGCTGCTGATGTTTATTGTGCGGTTTGCCATGAGTGCCGGTCCGCTGATTTGGGTACTGTGCTCCGAAATTC A 1400  
GCAGCCGCGTCAATAAGCGGTAGCGGTACGACGACTACAAA TAACAGCCAAAACGGTACTCACGGCCAGGCGACTAAACCCATGACACGAGGCTTTAAGT  
Pro Ser Ala Gln Tyr Phe Ala Ile Ala Met Leu Leu Met Phe Ile Val Gly Phe Ala Met Ser Ala Gly Pro Leu Ile Trp Val Leu Cys Ser Glu Ile Gln

FIG. 14B

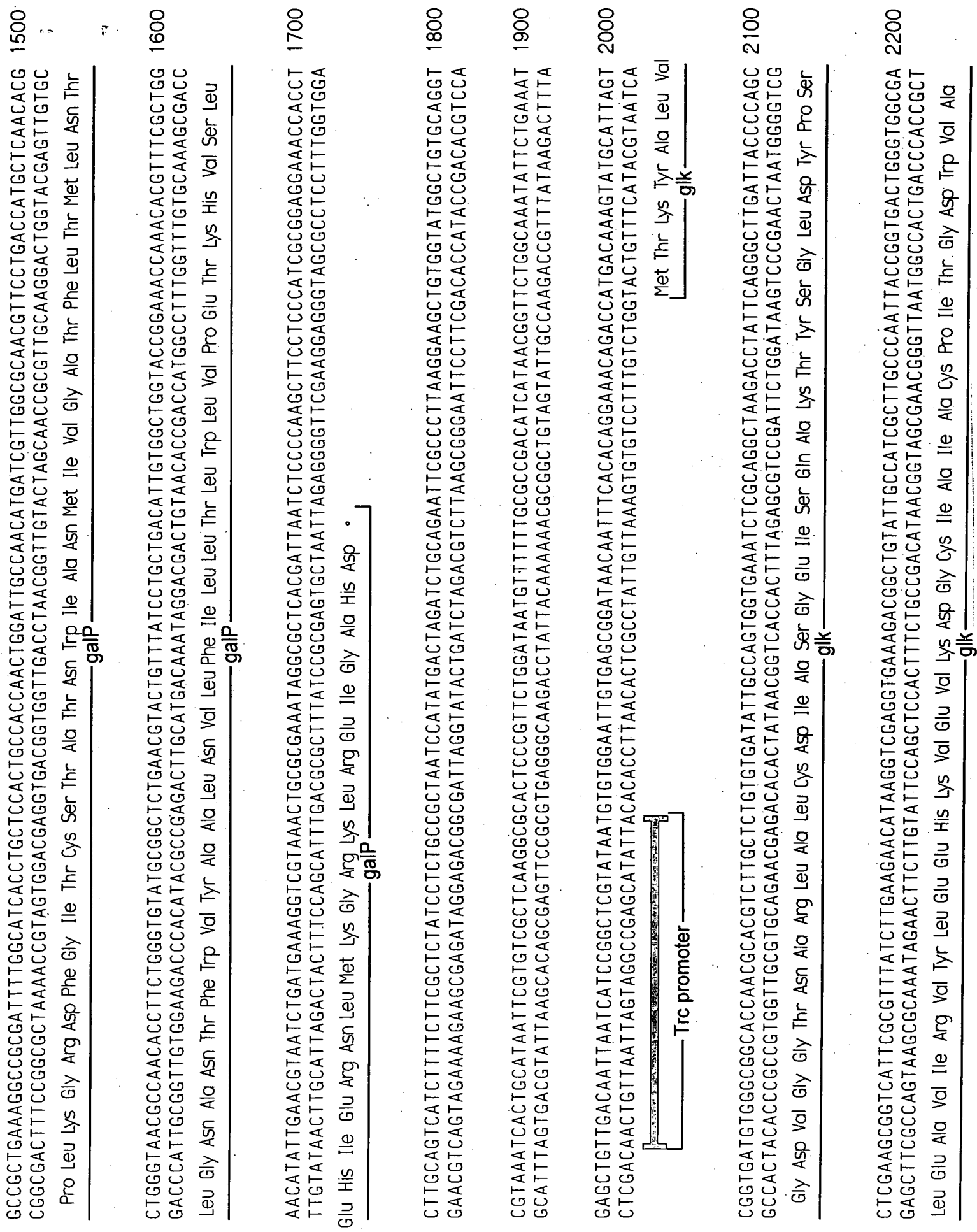


FIG. 14C



TGACCAACCATACCTGGCGGTTCICAATTGCCGAAATGAAAAAGAAATCTCGGTTTTAGCCATCIGGAAATTAACGATTTTACCGCTGTATCGATGGC 2300  
 ACTGGTTGGTATGGACCCGCAAGAGTTAACGGCTTTACTTTTCTTAGAGCCAAATCGGTAGACCTTTAATAATTGCTAAATGGCGACATAGCTACCG  
 Met Thr Asn His Thr Trp Ala Phe Ser Ile Ala Glu Met Lys Lys Asn Leu Gly Phe Ser His Leu Glu Ile Ile Asn Asp Phe Thr Ala Val Ser Met Ala  
 \_\_\_\_\_gk\_\_\_\_\_

GAACCCGATGCTGAAAAAAGAGCATCTGATTCAGTTTGGTGGCGCAGAACCCGGTCGAAGGTAAAGCCTATTGCGGTTTACGGTGCAGGAAACGGGGCTTGGG 2400  
 CTGGGGCTACGACTTTTTTCTCGTAGACTAAGTCAAAACCACCGGCTTGGCCAGCTTCCATTCCGATAACGCCAAATGCCACGGCCTTGCCCCGAAACCC  
 Asn Pro Met Leu Lys Lys Glu His Leu Ile Gln Phe Gly Ala Glu Pro Val Glu Gly Lys Pro Ile Ala Val Tyr Gly Ala Gly Thr Gly Leu Gly  
 \_\_\_\_\_gk\_\_\_\_\_

GTTGGCATCTGGTCCATGTCGATAAGCGTTGGTAAGCTTGCCAGGCGAAGGGGTACGTTGATTTTGGCCCGAATAGTGAAGAAGAGGCCATTATCC 2500  
 CAACGCGTAGACCAGGTACAGCTATTTCGAACCCATTTCGAACGGTCCGCTTCGCCAGTGCAACTAAACGCCGCTTATCACTTCTTCTCCGGTAATAGG  
 Val Ala His Leu Val His Val Asp Lys Arg Trp Val Ser Leu Pro Gly Gly His Val Asp Phe Ala Pro Asn Ser Glu Glu Ala Ile Ile  
 \_\_\_\_\_gk\_\_\_\_\_

TCGAAATATTGCGTGGGAAATGGTCAATGTTTCGGCGGAGGCGTGCCCTTCTGGCCCTGGGCTGGTGAATTTGTATCGCGCAATTTGTGAAAGCTGACAA 2600  
 AGCTTTATAACGCACGCCCTTTAACCCAGTACAAAGCCGCTCCGCACGGAAAGACCGGACCCGACCCTTAAACATAGCGCGTTAACACACTTTCGACTGTT  
 Leu Glu Ile Leu Arg Ala Glu Ile Gly His Val Ser Ala Glu Ala Cys Leu Ser Gly Pro Gly Leu Val Asn Leu Tyr Arg Ala Ile Val Lys Ala Asp Asn  
 \_\_\_\_\_gk\_\_\_\_\_

CCGCTGCCAGAAAAATCTCAAGCCAAAAGATATTACCGAACGCGCGTGGCTGACAGCTGCACCGATTGCCCGCGCATTTGTCGCTGTTTTGCGTCATT 2700  
 GGCGGACGGTCTTTAGAGTTCGGTTTCTATAATGGCTTGGCGCGACCGACTGTGACGTGGCTAACGGCGGCGCTAACAGCGACAAAACGGAGTAA  
 Arg Leu Pro Glu Asn Leu Lys Pro Lys Asp Ile Thr Glu Arg Ala Leu Ala Asp Ser Cys Thr Asp Cys Arg Arg Ala Leu Ser Leu Phe Cys Val Ile  
 \_\_\_\_\_gk\_\_\_\_\_

ATGGGCGGTTTTGGCGGCAATCTGGCGCTCAATCTCGGGACATTTGGCGCGGTGTTTTATTGCGGGCGGTATCGTGCCGCGCTTCCTTGAGTTCCTTCAAAG 2800  
 TACCCGGCAAAACCGCGGTTAGACCGCGAGTTAGAGCCCTGTAAACCGCGCACAAATAACGCCGCCATAGCACGGCGGAAGGAAGTTC  
 Met Gly Arg Phe Gly Asn Leu Ala Leu Asn Leu Gly Thr Phe Gly Gly Val Phe Ile Ala Gly Gly Ile Val Pro Arg Phe Leu Glu Phe Phe Lys  
 \_\_\_\_\_gk\_\_\_\_\_

GCTCCGGTTTCCGTGCCGCAATTTGAAGATAAAGGGCGCTTAAAGAAATATGTCATGATATTCGGGTGATCTCATCGTCCATGACAAATCCGGGCCCTTCT 2900  
 CGAGGCCAAAGCACGGCGTAACCTTCTATTTCGCGGAAATTTCTTATACAGGTACTATAAGGCCACATAGAGTAGCAGGTACTGTAGGCCCGGAAGA  
 Gly Ser Gly Phe Arg Ala Ala Phe Glu Asp Lys Gly Arg Phe Lys Glu Tyr Val His Asp Ile Pro Val Tyr Leu Ile Val His Asp Asn Pro Gly Leu-Leu  
 \_\_\_\_\_gk\_\_\_\_\_

FIG. 14D

CGGTCCGGTGCACATTTACGCCAGACCTTAGGTCACATTCTGTAAATCCCTTCTTTATATCGGGAGGTAACCTCTCCGATAATCTTTTAAATCATACA 3000  
GCCAAGGCCACGTGTAAATGCGGTCIGGAATCCAGTGTAAGACATTTAGGAAGGAAATATAGCCCTCCATTGAGAGGGCTATTAGAAAAATTTAGTATGT

Gly Ser Gly Ala His Leu Arg Gln Thr Leu Gly His Ile Leu •  
\_\_\_\_\_glk\_\_\_\_\_

GTTTATTCAATTTTTCITTTGTGTCCCTCACAAGGTCGAC 3040  
CAATAAGTTAAAGAAACACACAGGGGAGTGTTCAGCTG